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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 2000
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0203726A Advanced Field Artillery Tactical Data System
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COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	34569	40860	36816	34330	31379	12755	6299	0	233233
D322 AFATDS Development	30795	38917	36816	34330	31379	12755	6299	0	223369
D2ET AFATDS Operational Test	3774	1943	0	0	0	0	0	0	9864

A. Mission Description and Justification: The Advanced Field Artillery Tactical Data System (AFATDS) will broaden and modernize the US Army fire support command, control and communications (C3) system. As a part of the Army Battle Command System (ABCS) architecture, AFATDS will provide automated fire support, fire planning and the coordination and employment of all service/combined fire support assets to complement the commander's scheme of maneuver. AFATDS will accomplish this by providing fully automated support for planning, coordination and control of all fire support assets (mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, field artillery cannons, rockets and guided missiles) in the execution of close support, counterfire, interdiction, suppression of enemy air defense and deep operations. AFATDS will automatically implement detailed commander's guidance in the automation of operational planning, movement control, targeting, target value analysis and fire support planning. This project is a replacement system for the Initial Fire Support Automated System (IFSAS).

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	34646	36222	34528
Appropriated Value	34881	41222	
Adjustments to Appropriated Value			
a. Congressional General Reductions	-235		
b. SBIR / STTR	-898		
c. Omnibus or Other Above Threshold Reductions	+691	-165	
d. Below Threshold Reprogramming	+270		
e. Rescissions	-140	-197	
Adjustments to Budget Years Since FY 2000/2001 PB			+2288
Current Budget Submit (FY 2001 PB)	34569	40860	36816

Change Summary Explanation: Funding – FY 2000: Increase due to Congressional increase to support interface development (+5000).
 FY 2001: Increase to support the development of software for FDC IAW the AFATDS System Acquisition Program Baseline (+5900) and Operational Test funds realigned to the ATEC institutional test line due to AFATDS redesignation to ACAT II system (-3600).

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BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0203726A Advanced Field Artillery Tactical Data System				PROJECT D322		
<i>COST (In Thousands)</i>	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost	
D322 AFATDS Development	30795	38917	36816	34330	31379	12755	6299	0	223369	
<p><u>Mission Description and Justification:</u> Project D322 – AFATDS Development: The project is composed of Army Battlefield Command System (ABCS) Common Hardware/Software (CHS) employed in varying configurations at different operational facilities (or nodes) and unique system software interconnected by tactical communications in the form of a software-driven, automated network. Both hardware and software will be capable of being tailored to perform the fire support command, control and coordination requirements at any level of command. This will permit variable command and control relationships and full fire support functionality at all echelons of field artillery and maneuver, from echelons above corps to battery or company in support of all levels of conflict. The Marine Corps will also utilize AFATDS. AFATDS will interoperate with Navy and Air Force Command and Control weapon systems as well as the Allied fire support systems ADLER (Germany), ATLAS (France), BATES (UK), and SIR (Italy).</p> <p>FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • 4441 Support Limited User Test and Materiel Release of AFATDS '98 Software • 26354 Continue AFATDS software development in support of First Digitized Division/First Digitized Corps (FDD/FDC) <p>Total 30795</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 2256 Support Limited User Test of AFATDS '99 software. • 2917 Integration/interface development with other FDD systems. • 32720 Continue AFATDS software development in support of FDD/FDC. • 1024 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) <p>Total 38917</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 2610 Support Test and Materiel Release of AFATDS '99 Software Release • 34206 Continue AFATDS software development in support of FDD/FDC. <p>Total 36816</p>										
Project D322			<i>Page 2 of 8 Pages</i>			Exhibit R-2A (PE 0203726A)				

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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0203726A Advanced Field Artillery Tactical Data System	PROJECT D322
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B. <u>Other Program Funding Summary</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
OPA (B28600)	39313	43144	54452	52788	50442	49576	49524	75000	423634
Spares (BS9708)	2071	2674	2637	2815	2533	2601	2599	2700	22250

C. Acquisition Strategy: AFATDS software will be developed in incremental releases. AFATDS '96, previously named Version 1, received Materiel Release on 13 December 1996. It automated 51% of the required tasks including fire support planning, target nomination, order of fire, and meteorological/survey operations. Subsequent releases will add additional functions, providing automated capabilities for the required tasks including fire support sensor planning and additional munitions. Completion of AFATDS '04 will result in automation of all required functionality including full fire support planning, target acquisition support and field artillery mission support. FY05 will support continued efforts to address emerging weapon systems and interoperability requirements. Additionally, the completed software will utilize the Joint Common Operating Environment (JCOE) and the Joint Technical Architecture. AFATDS will support FDD/FDC and other Army Warfighter Experiments through FY 2004.

D. <u>Schedule Profile</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
AFATDS '97 Materiel Release							
AFATDS '98 Materiel Release		1Q					
AFATDS '99 Materiel Release			2Q				
AFATDS '02 Materiel Release				3Q			
AFATDS '03 Materiel Release					4Q		
AFATDS '04 Materiel Release							1Q

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ARMY RDT&E COST ANALYSIS (R-3)

DATE **February 2000**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0203726A Advanced Field Artillery Tactical Data System

PROJECT
D322

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Software Development	SS/CPAF	Raytheon Systems Corp (prev. MX, HDC)	24639	27920	Jan 99	31384	Feb 00	33177	Jan 01	73343	190463	
b. COE/Common Software/Common Products	MIPR	DISA/ATCCS/PEO C3S	2078	379	Jan99	2917	Feb 00	200	Jan 01	0	5574	
c. GFE: PSE	C/FFP	Miltope, Litton, GTE	2001	144	Jan99	583	Feb 00	553	Jan 01	1144	4425	
Subtotal Product Development:			28718	28443		34884		33930		74487	200462	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Software Development Support	MIPR	CECOM SED	200	250		347		366		1486	2649	
b. Software Development Support	MIPR	FSSSED/TELOS	690	446		593		417		1510	3656	
Subtotal Support Costs:			890	696		940		783		2996	6305	

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Test Management	MIPR	CECOM	100	440		389		390		1575	2894	
b. Test Hardware										0		
c. Test Support	MIPR	Misc										
Subtotal Test and Evaluation:			100	440		389		390		1575	2894	

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 2000		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0203726A Advanced Field Artillery Tactical Data System					PROJECT D322		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PM Support	C/CPFF	CSC, NJ	729	450		322		317		2451	4269	
b. PROGRAM MANAGEMENT:												
c. PM FATDS			581	446		727		759		1777	4290	
d. MATRIX			734	320		631		637		1477	3799	
e. Misc. Contracts												
f. CECOM			326								326	
g. SBIR/STTR						1024					1024	
Subtotal Management Services:			2370	1216		2704		1713		5705	13708	
Project Total Cost:			32078	30795		38917		36816		84763	223369	

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BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0203726A Advanced Field Artillery Tactical Data System				PROJECT D2ET		
COST (In Thousands)		FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D2ET AFATDS Operational Test		3774	1943	0	0	0	0	0	0	9864

A. Mission Description and Budget Item Justification: Project D2ET – AFATDS Operational Test: This project finances the direct costs of planning and conducting operational testing and evaluation of the Advanced Field Artillery Tactical Data System (AFATDS) by the Army Test and Evaluation Command (ATEC). Limited User Tests (LUTs) are planned for AFATDS software releases in FY00, FY02, FY03 and FY04. LUTs are conducted under conditions, as close as possible, to those encountered in actual combat with typical user troops trained to employ the system. ATEC provides Army leadership with an independent test and evaluation of effectiveness and suitability of the system. AFATDS LUTs in FY01 and beyond will be funded from the ATEC Institutional Test line due to AFATDS redesignation as ACAT II.

FY 1999 Planned Program:

- 1648 Conduct AFATDS '98 LUT and evaluate test results
- 1308 Prepare for AFATDS '99 LUT
- 818 Prepare for and Support ABCS testing

Total 3774

FY 2000 Planned Program:

- 1564 Support AFATDS '99 LUT and evaluate test results
- 327 Prepare for and Support ABCS testing
- 52 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)

Total 1943

FY 2001 Planned Program: Funds moved to PE 0605712A, project 001 due to the redesignation of AFATDS to an ACAT II program.

B. Other Program Funding Summary: Not Applicable

C. Acquisition Strategy: Not Applicable

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<u>D. Schedule Profile</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
AFATDS '97 LUT							
AFATDS '98 LUT	2Q						
AFATDS '99 LUT		4Q					
AFATDS '02 LUT				1Q			
AFATDS '03 LUT					2Q		
AFATDS '04 LUT						3Q	

